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Field Service Procedure

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**Narkomed 6400
Software Version 4.02 Enhancement**

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Narkomed 6400

Software Version 4.02 Enhancement

SOFTWARE INSTALLATION PROCEDURE

CAUTION: Prior to performing this enhancement, the user applications software version must be at 4.01. Failure to comply with this precaution may result in a WPU or related system failure.

Kit List:

The following items will be contained within Software Upgrade Kit V4.02 (P/N 4118452):

4118446	Supplement to the Narkomed 6400 Operator's Instruction Manual to Reflect Software Version 4.02
4118447	Supplement to the Operator's Instruction Manual for the IPM Option for the Narkomed 6400 to Reflect Software Version 4.02 (included in kits only for machines equipped with an IPM pod)
4115120-006	Software Version 4.02 CD-Rom
4118451	Label, Software Version 4.02
SP00280	Field Service Procedure - Narkomed 6400 Software Version 4.02 Enhancement

1.0 Software Installation

- a If the NM6400 4.02 installation wizard program was previously run to load the CDROM files on to the laptop hard drive, skip to step 1.1.
- b Close all Windows programs.
- c Insert the Narkomed 6400 - 4.02 Software CD-ROM into the CD ROM drive of the Laptop.
- d If the Laptop drive is not set up to auto run, browse the CD using Windows Explorer and double click Set-up.exe.
- e At the "Welcome to NM6400 Transfer Program" dialog box, click "Next".
- f At the "Remove Existing Components" dialog box, select the 'Clear All' button if you do not want to uninstall any previous software versions or select any or all previous software versions you wish to uninstall from your laptop then click "Next".
- g At the "Select Component" dialog box, select "NM6400 Version 4.02", then click "Next" to begin loading the program onto the laptop.
- h At the "Transfer Results" dialog box, verify the NM6400 4.02 files were transferred, then click "Next".

SOFTWARE INSTALLATION PROCEDURE (continued)

- i Close any open windows then turn off laptop.
- 1.1 Configure the laptop computer to communicate with the Narkomed 6400. Refer to Section 2 of the Narkomed 6000 Series Technical Service Manual for the appropriate NM6K Series Event Log Transfer procedure based on the laptop computer's operating system. After the initial laptop configuration and after configuration changes are made, verify proper setting by successfully completing an event log transfer.

NOTE: If the laptop is provided with a modem card separate from the LAN card, disable or remove it during this procedure.

- 1.2 With the NM6400 System Power switch at STANDBY, connect a keyboard P/N 4115133 to the DIN connector on the underside of the NM6400 cockpit area. See FIGURE 1-1.

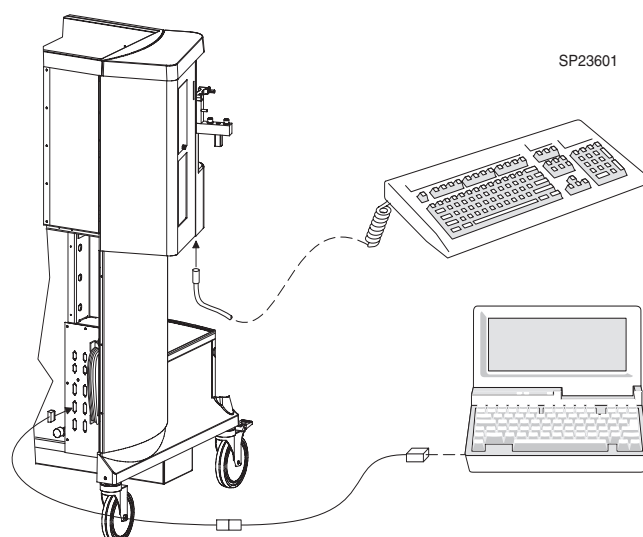


FIGURE 1-1. Keyboard and Laptop Connections

- 1.3 With the laptop power switched off, connect the Vitalbus cable P/N 4113989-001 or 4113898-002 to any Vitalbus port (J4 thru J7) on the NM6400. Connect the other end of the cable to the laptop's LAN card as shown in FIGURE 1-1.

CAUTION: Before connecting an external computer to the Narkomed 6400, verify the computer is running a virus protection application set to scan all files and is enabled. You must also verify that the scan engines and definition files are of current vintage.

- 1.4 Turn the System Power switch to ON. Press the Divan Standby key and wait for the NM6400 to complete its startup sequence.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.5 Access the main Service Mode screen. Select the Workstation tab. Record the WPU (Processor Unit) serial number listed on the NM6K Service Mode page for future reference. Touch the OK button to close this dialog. Refer to FIGURE 1-2.

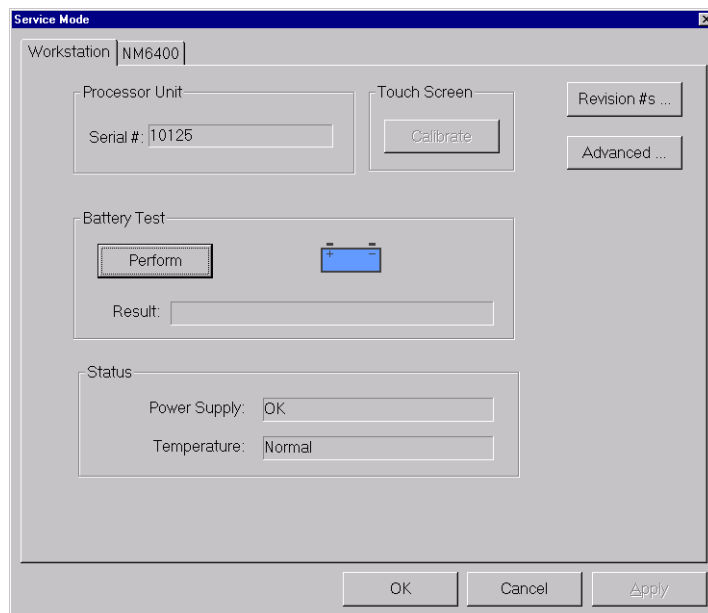


FIGURE 1-2. WPU Serial Number Location

- 1.6 On the keyboard connected to the NM6400, press the ESC key several times. The next sequence of steps must be performed quickly and in this exact order:
 - 1.6.1 Press and hold the CTRL key, press and hold the F9 key, release the CTRL key, release the F9 key.
 - 1.6.2 Press and hold the ALT key, press and hold the F9 key, release the ALT key, release the F9 key.
- NOTE:** You may need to repeat the previous step several times to disable the keyboard filter if you are not able to perform the next step. While the filter is active, no keystrokes are passed on to any application or the operating system. The following steps will not work if you are NOT successful in disabling the keyboard filter. THERE ARE NO PHYSICAL INDICATIONS THAT THE FILTER HAS BEEN DISABLED.
- 1.7 On the keyboard connected to the NM6400, press the Windows key or CTRL+ESC keys to bring up the Start menu.
- 1.8 Select 'Settings->Control Panel' from the task bar.

SOFTWARE INSTALLATION PROCEDURE (continued)

NOTE: When navigating using the touch screen, use a narrow blunt object for making selections. When an item is selected it will be highlighted and a dotted line will appear around the text.

- 1.9 On the Control Panel dialog, select the 'ELO Touchscreen' icon then press Enter.
See FIGURE 1-3.

NOTE: If there are multiple ELO Touchscreen listings, select the first entry.

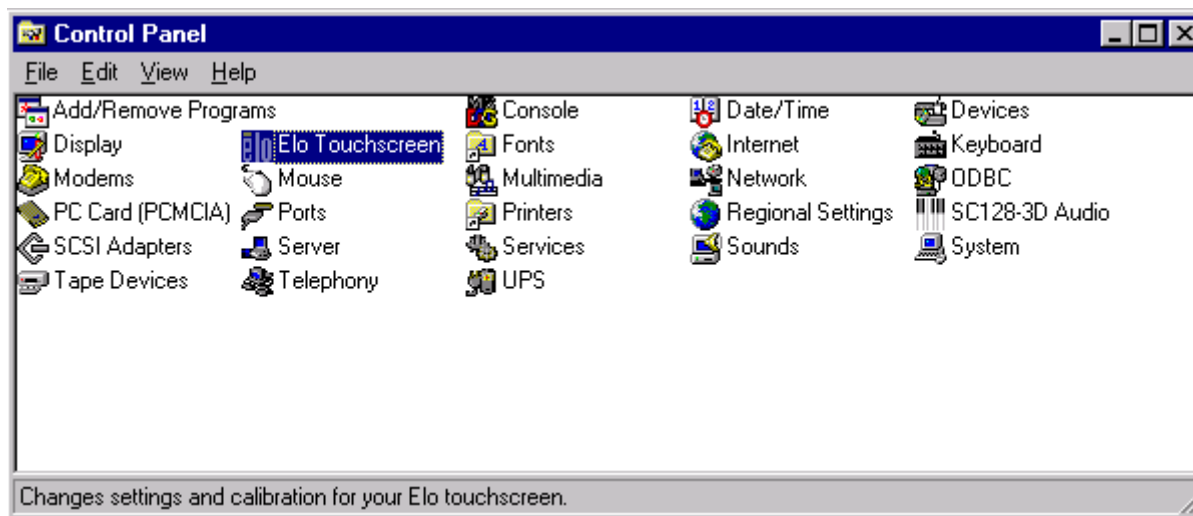


FIGURE 1-3. Control Panel Example

SOFTWARE INSTALLATION PROCEDURE (continued)

1.10 On the ELO Touchscreen dialog, press the 'Calibrate' button. See FIGURE 1-4.

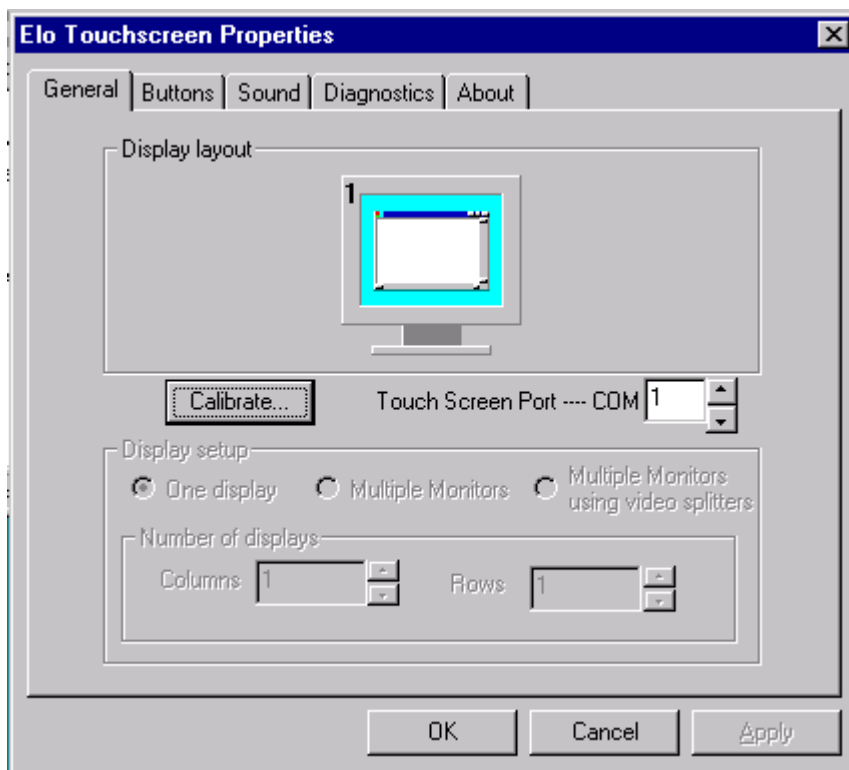


FIGURE 1-4. Touchscreen Dialog

- 1.11 Touch the screen at the specified three locations. Verify that the touchscreen is calibrated by touching at different locations. Verify that you can position the cursor accurately in all four corners.
- 1.12 Select the Sound tab and verify 'Enable Click Sounds' is not selected, then press OK. If 'Enable Click Sounds' is selected, deselect it, then press OK.
- 1.13 Touch the 'X' to close the control panel dialog box.
- 1.14 Power up the laptop and enter your network password as "password" if prompted.

NOTE: If using a Windows NT or Windows XP laptop, you must press Ctrl+Alt+Delete to log on and add your unique number to the 'Computer Name': i.e., 'SRVLAP042' or 'L12345'.

NOTE: If your password, computer name or domain was changed, contact your administrator if this information is not known.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.15 Using the keyboard connected to the NM6400, press Ctrl+Alt+Delete to display the Windows NT Security dialog box as shown in FIGURE 1-5.

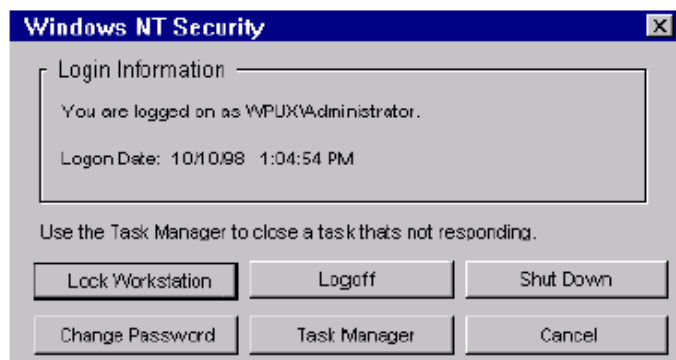


FIGURE 1-5. Windows NT Security

- 1.16 Touch the 'Task Manager' button to launch the Windows NT Task Manager dialog.
- 1.17 Touch the 'Applications' tab page.

NOTE: If you do not see any tabs on the Task Manager window, the current view is collapsed. To see an expanded view, touch the Task Manager box near the middle along the right edge of its frame.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.18 Select the 'SYSTEM 1 MANAGER' application by touching the corresponding icon. See FIGURE 1-6.



FIGURE 1-6. Applications Tab; System 1 Manager

- 1.19 Touch the 'End Task' button.
- 1.20 Touch the 'Processes' tab page.

SOFTWARE INSTALLATION PROCEDURE (continued)

1.21 Touch the screen at the 'gsplus.exe' file. See FIGURE 1-7.

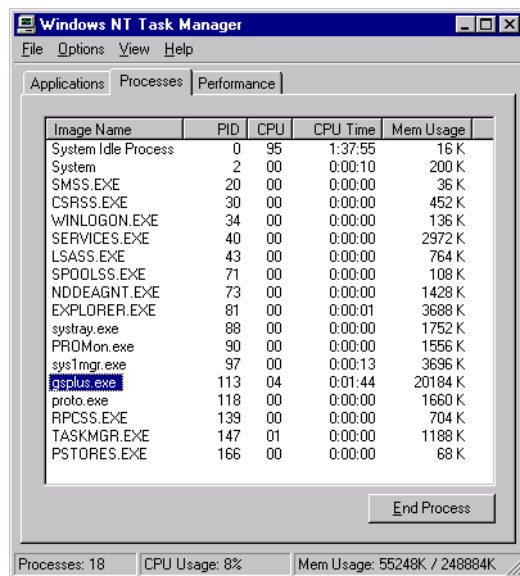


FIGURE 1-7. Processes Tab; gsplus.exe

1.22 Touch the 'End Process' button.

1.23 Touch 'Yes' in the Task Manager Warning dialog to end the task. See FIGURE 1-8.

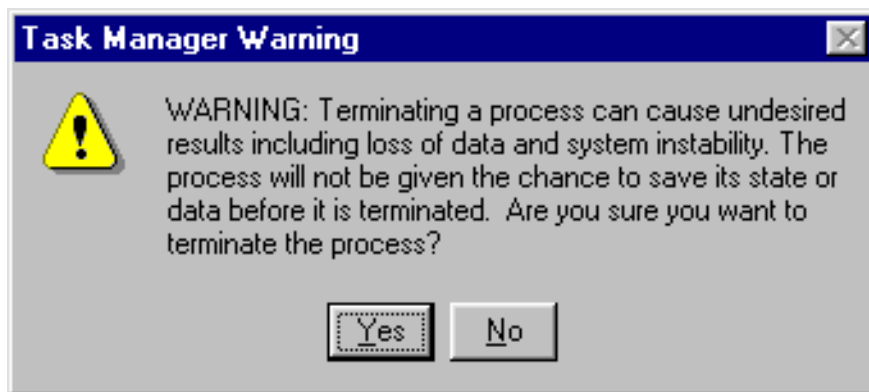


FIGURE 1-8. Task Manager Warning

1.24 On the keyboard connected to the NM6400, type 'Alt+F4' to close the Windows NT Task Manager.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.25 On the keyboard connected to the NM6400, press the Windows key or 'Ctrl+Esc', then select 'Programs->Windows NT Explorer' from the task bar.
- 1.26 From the menu list at the top of the Explorer window select 'Tools', 'Map Network Drive...', then press Enter. Refer to FIGURE 1-9.

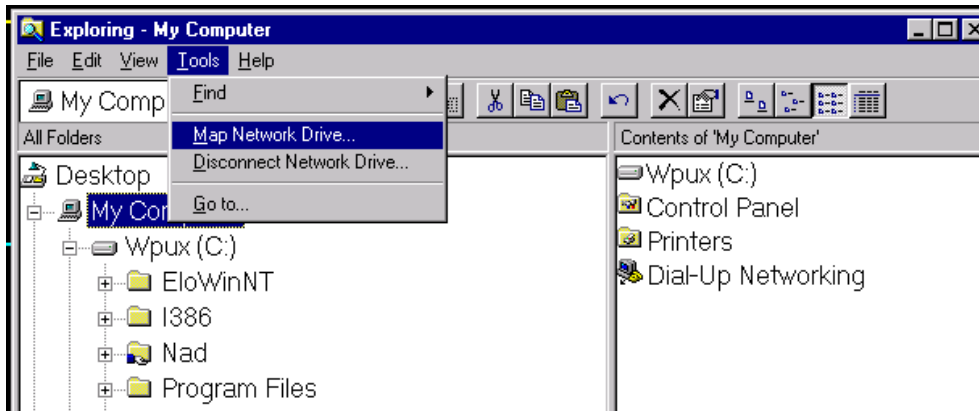


FIGURE 1-9. Map Network Drive Dialog

- 1.27 Touch the 'Drive:' dropdown arrow and select the 'E:' drive.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.28 Touch the 'Path' dropdown arrow and select your previously entered path name, i.e., '\\srvlap\NAD Software' if using Windows 95 or Windows 98, or Windows ME. If using Windows NT or Windows XP, you must use your unique computer name in the field path, i.e., '\\srvlap042\NAD Software', or '\\L98474\NAD Software'. If your required path is not included in the dropdown list, touch the 'Path' field to move the cursor, then use the keyboard connected to the NM6400 to enter this information. See FIGURE 1-10.

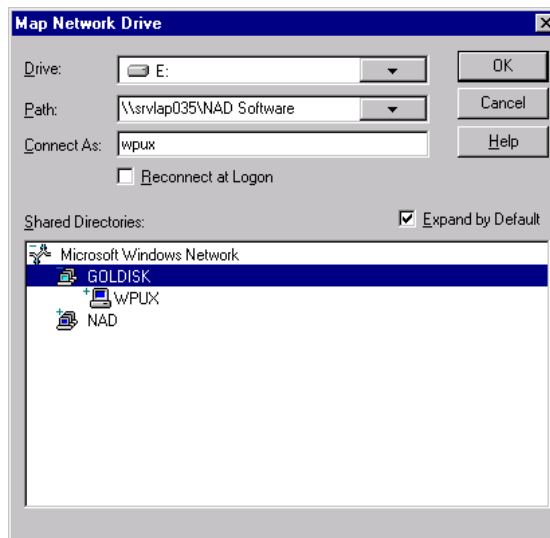


FIGURE 1-10. Map Network Dive Dialog

- 1.29 Touch the 'Connect As' field to move the cursor to the 'Connect As' field. Then use the keyboard connected to the NM6400 to enter 'wpux'.
- 1.30 Ensure that the 'Reconnect at Login' check box is deselected. Click OK.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.31 If not using a Windows NT laptop, skip to next step, or at the 'Enter Network Password' dialog, remove the text from the 'Connect As:' field and type in your computer name, i.e., 'srvlap035'. In the 'Password' field, enter 'password' as the password. Click OK. See FIGURE 1-11.

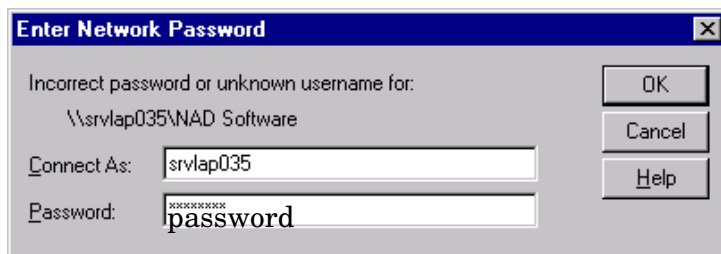


FIGURE 1-11. Example 'NT Laptop Network Password' Dialog

- 1.32 Using the keyboard connected to the Narkomed 6400, press F5 to refresh the display.
- 1.33 On the NM6400 display screen, select 'NAD Software on (E:)'. See FIGURE 1-12.

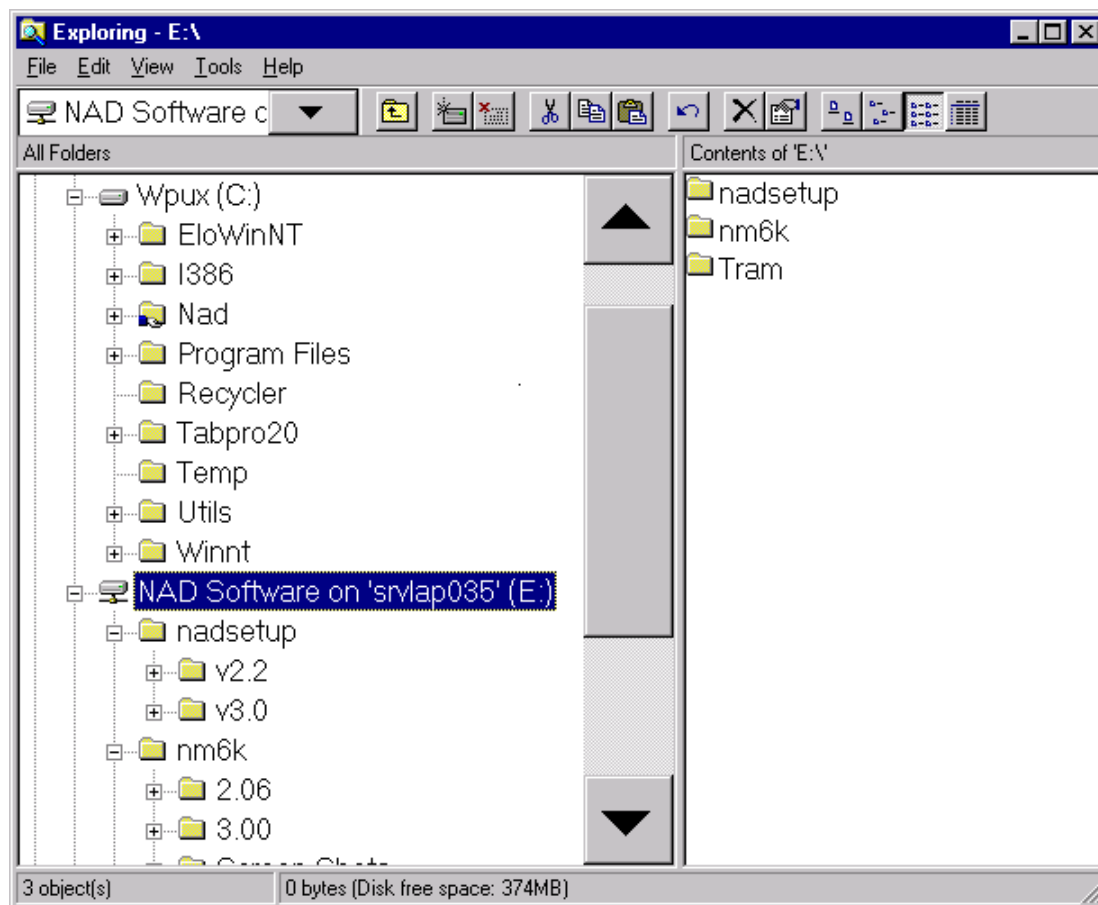


FIGURE 1-12. Typical NAD Software Dialog

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.34 Select the 'nadsetup' folder and press Enter, then select 'v4.02' folder and press Enter. See FIGURE 1-13.

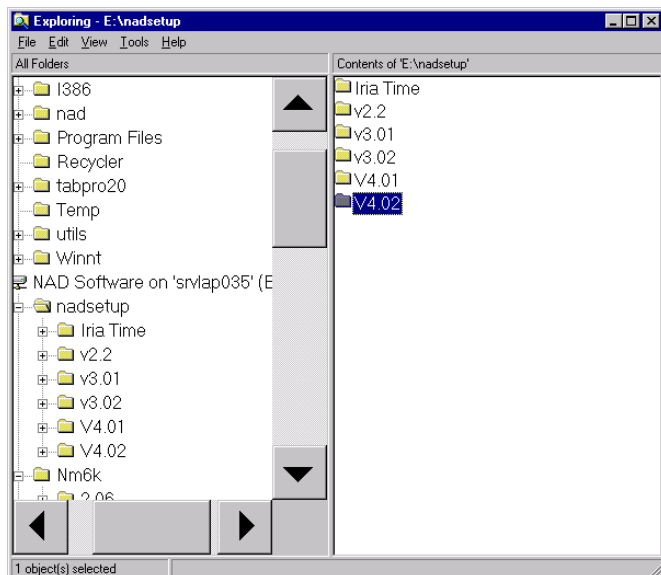


FIGURE 1-13. v4.02 Folder

- 1.35 Use the arrow key on the keyboard connected to the NM6400 to select 'Install.bat' file, then press Enter to run the NAD Install program.
- 1.36 On the 'NAD Installation' dialog, ensure that 'NM6K' is selected as the program, and click the 'Install' button. See FIGURE 1-14.

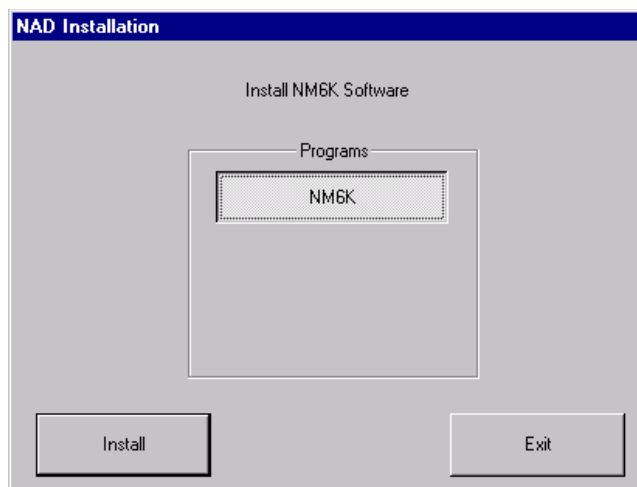


FIGURE 1-14. 'NAD Installation' Dialog

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.37 Touch the 'Enter NAD dir' field. Then using the keyboard connected to the NM6400, type in the source directory as 'E:\NM6K\4.02' and press Enter. See FIGURE 1-15.

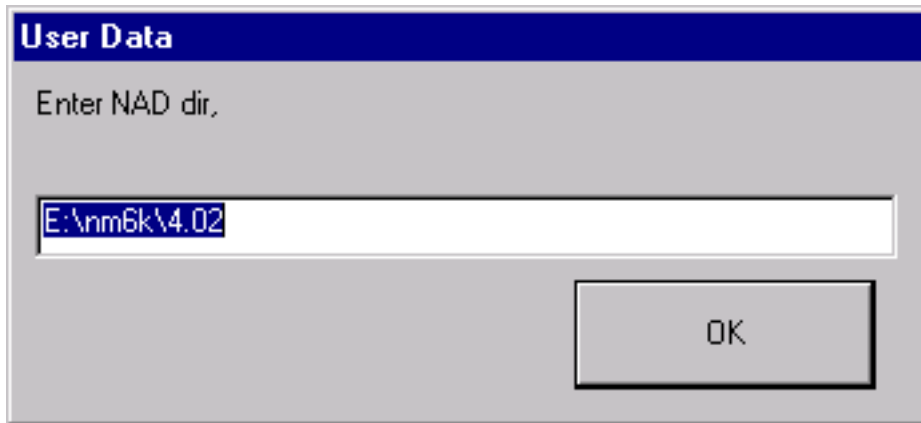


FIGURE 1-15. Source Data Dialog

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.38 Examine the communication ports on the Vitalbus assembly. If you have four communication ports - COM 5, COM 6, COM 7, and COM 8 (see FIGURE 1-16.), then touch the 'Yes' button for 'Is isocomm board installed?' in the dialog box shown in FIGURE 1-17. Select the 'No' button if COM 5, COM 7, and COM 8 are covered with blank plates.

CAUTION: Failure to select the proper communication port(s) configuration will result in a system diagnostic failure at start-up causing the machine's WPU to keep re-booting.

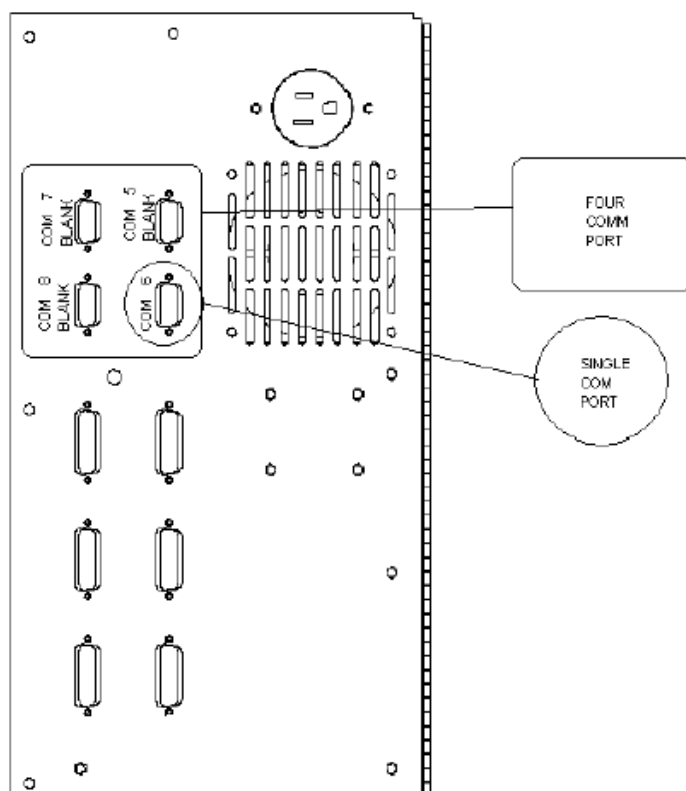


FIGURE 1-16. Vitalbus Communication Port Options

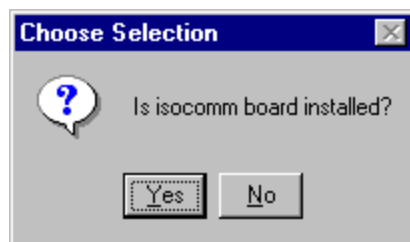


FIGURE 1-17. Isocomm Dialog

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.39 Verify the Nm6kmsg.dll = 0xBA0D, CVP = "1.08 POD IPM" - 0x79E7, SCR - "1.04 POD SCR" - 0x66EC data displayed on the "User Info" dialog box, then press the OK button. See FIGURE 1-18.

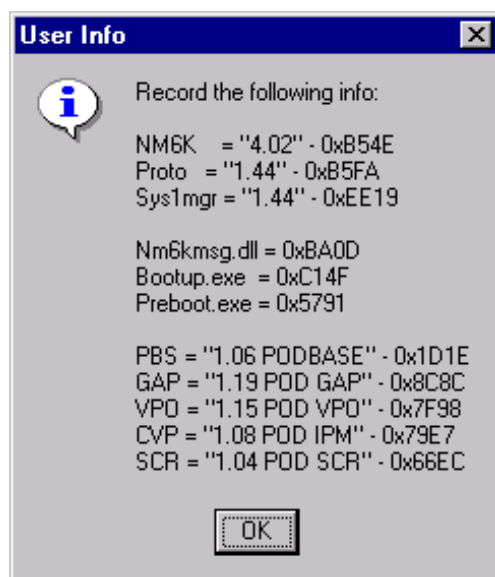


FIGURE 1-18. 4.02 CRC Values

- 1.40 If the WPU serial number is correct, touch the 'OK' button to continue. If the serial number is incorrect, touch the 'WPU Serial Number' field, then using the keyboard attached to the NM6400 type in the serial number previously recorded in Step 1.5. Then touch the 'OK' button to continue. See FIGURE 1-19.

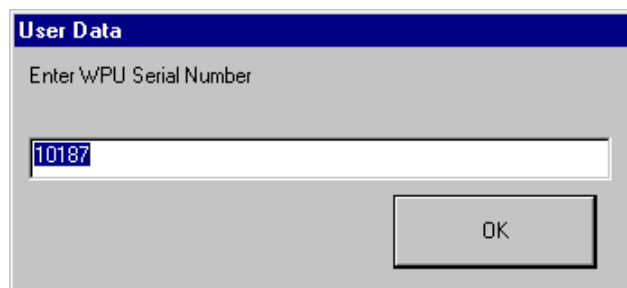


FIGURE 1-19. Typical Serial Number Dialog

SOFTWARE INSTALLATION PROCEDURE (continued)

1.41 Touch the 'OK' button for the Registry Editor Dialog. See FIGURE 1-20.

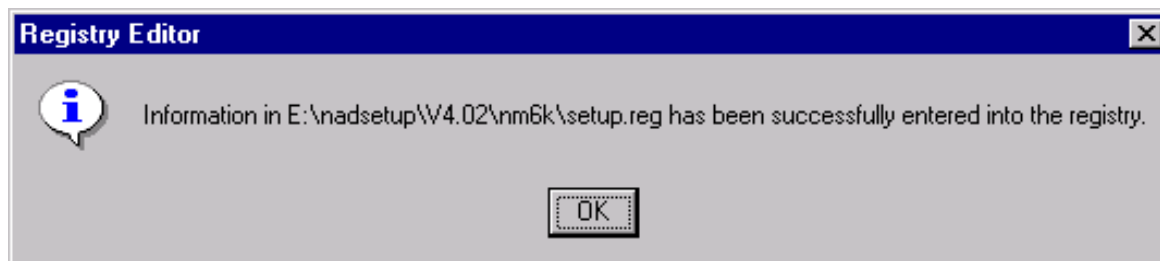


FIGURE 1-20. Registry Editor Dialog

1.42 Touch the 'OK' button on the 'Installation Completed' dialog. See FIGURE 1-21. The machine will reboot at this time. It could take several minutes to complete. After the machine reboots, sys1mgr will automatically start.

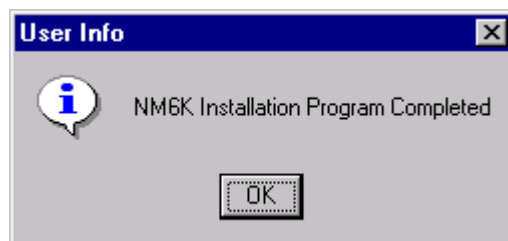


FIGURE 1-21. Installation Completed

NOTE: If there are new pod images, the images will be loaded to the pods on the first startup. This process is automatic and upon its completion the system self-diagnostic tests will continue.

CAUTION: Failure to select the proper communication ports(s) configuration will result in system diagnostic failure at start-up causing the machine's WPU to keep re-booting. To recover from this error should it occur, you must perform the following Step 2 should be started as soon as you see the Windows Start key displayed on the monitor and step 3 must be completed before the self-diagnostic system status dialog is displayed on the monitor. Repeat steps 1 - 3 if system continues to reboot:

1. Initiate a system reboot the by pressing the SYSTEM CONDITIONALLY FUNCTIONAL button.
2. Wait until you see the Windows Start key appear then unlock the keyboard connected to the NM6400 by performing step 1.6.
3. Shut down the SYSTEM 1 MANAGER and gsplus.exe by performing steps 1.15 - 1.24.
4. Proceed with this installation beginning at step 1.25.

SOFTWARE INSTALLATION PROCEDURE (continued)

NOTE: If you continue to experience a system re-boot situation, physically examine the WPU for the proper number of COM ports, then make the appropriate selection.

- 1.43 Access the Primary Service screen. (Refer to Accessing the Service Screens in Section 2.1 of the Narkomed 6000 Series Technical Service Manual.)
- 1.44 Access the Advanced Service Mode. (Refer to Accessing the Service Screens in Section 2.2 of the Narkomed 6000 Series Technical Service Manual.) Select Service Config key, NM6K tab, select the SERVICE button and enter your Technicians ID#.
- 1.45 If the machine requires the reactivation of an Audible O2 Whistle or *Air Only Mode optional feature, touch the Options tab in the NM6400 CONFIGURATION notebook to access the OPTIONS page. Touch the correct key to toggle the corresponding option to Enabled.

*Denotes a feature that requires a Software Option Keylok attached to the WPU parallel port for its activation.

NOTE: The Low Flow Wizard is enabled by default. If its deactivation is desired, toggle its setting to 'Not Installed.'

- 1.46 Press the Exit Service key. At the Service Mode dialog box, press the Revision #'s key to call up the Revision List dialog box. Use the scroll bar to navigate through the list and verify that all of the items identified in FIGURE 1-22. are at the proper CRC and version.

NAME	CRC	VERSION
BOOTUP	c14f	1.44
PREBOOT	5791	1.44
PROTO	b5fa	1.44
SYS1MGR	ee19	1.44

FIGURE 1-22. Service Mode Revision #s

- 1.47 Press the 'OK' key to close the Revision List dialog box. Press the 'OK' key to close the Service Mode dialog box. Press the 'To Primary Keys' button, then press the 'Setup Notebook' button. Select the 'About' tab to call up the 'About System Software' dialog box. Verify that all items identified in FIGURE 1-23. are at the proper CRC and version.

NAME	VERSION	CRC
NM6400	4.02	B54E
VPO	1.15	7F98
Gas Analysis	1.19	8C8C
Cardio, (if installed)	1.08	79E7
SCR, (if installed)	1.04	66EC

FIGURE 1-23. System Software Revision #s

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.48 Attach the SW 4.02 label (P/N 4118451) above the serial number label at the back of the machine where shown in FIGURE 1-24. If an option requiring a Keylok was enabled, attach its corresponding label above the SW 4.02 label.

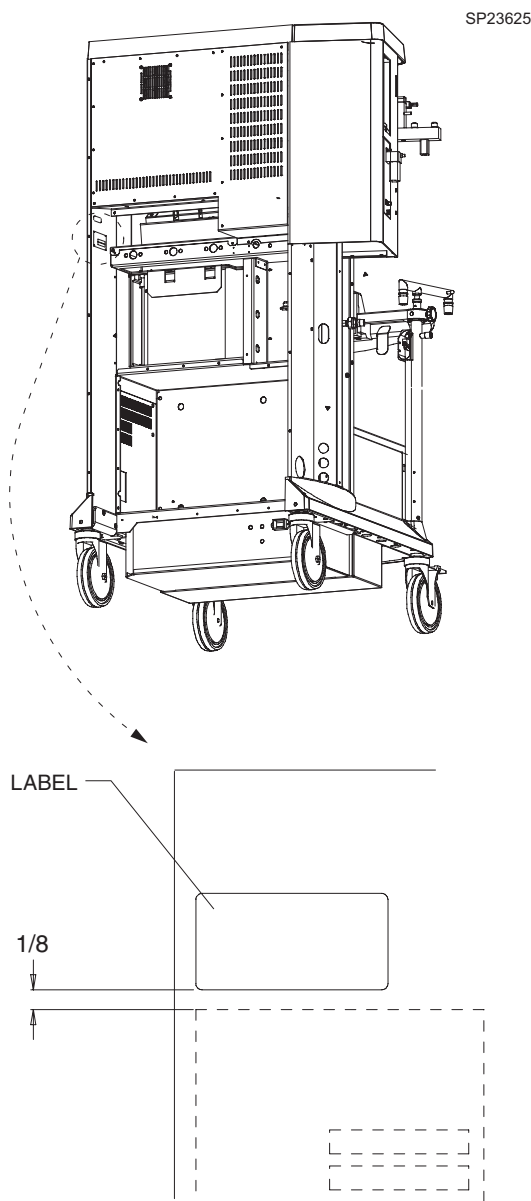


FIGURE 1-24. Label Installation

- 1.49 Touch the Update tab in the NM6400 CONFIGURATION to access the UPDATE page. (Refer to Accessing the Service Screens in Section 2.4.2 of the Narkomed 6000 Series Technical Service Manual.) If any PBS versions are displayed in red boxes, touch the corresponding area on the screen to initiate a PBS update.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.50 When the key is pressed the notebook disappears. Press the Service Config key to refresh the Service Config notebook and to select additional pods for download, if required. After all downloads are completed, they will reset and reference the latest pod-based software versions. Then turn the System Power switch to Standby. See FIGURE 1-25.

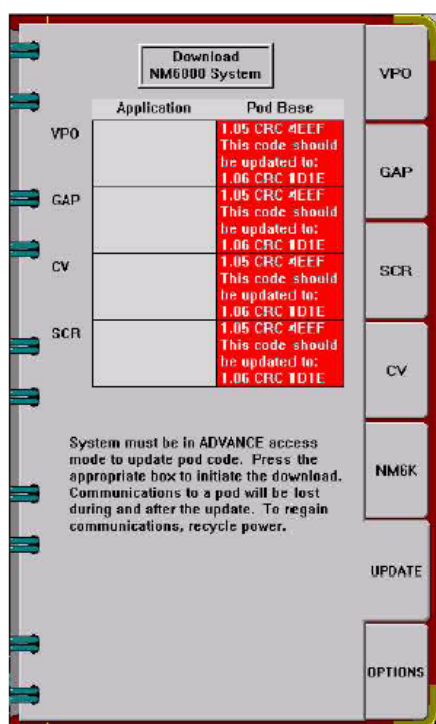


FIGURE 1-25. PBS Screen

- NOTE:** Communication will be lost during this update. This is normal and communication will be regained after cycling power.
- 1.51 Turn the NM6400 System Power switch to ON and verify the software options are available, and all pod base software versions are 1.06 and CRC value 1D1E.
- 1.52 Locate the *Supplement to the Narkomed 6400 Operator's Instruction Manual to reflect Software Version 4.02* (P/N 4118446) that is included in this kit, and insert it at the back of the operator's manual binder assembly.

If the machine is fitted with an IPM pod, locate the *Supplement to the Operator's Instruction Manual for the IPM Option for the Narkomed 6400 to reflect Software Version 4.02* (P/N 4118447) that is included in this kit, and insert it at the back of the operator's manual binder assembly.

SOFTWARE INSTALLATION PROCEDURE (continued)

- 1.53 Set the ventilator to Volume mode ventilation. Press 'To Secondary Keys' on the taskbar. Then touch the 'Low Flow Wizard' key and verify that the Low Flow Wizard is enabled. (If activation of this feature is not desired, verify that it cannot be enabled.) Set the ventilator to Standby.
- 1.54 Perform a periodic manufacturer's Service on this machine. Refer to Section 6 of the Narkomed 6000 Series Technical Service Manual.
- 1.55 If applicable, also perform the IPM test procedure given in Section 6A of the Narkomed 6000 Series Technical Service Manual.

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